Lesson 5: A Short Cross-Country Flight

As in the generic FITS syllabus, this lesson involves a short flight to a nearby town so that you can tour a manufacturing plant.

Scenario

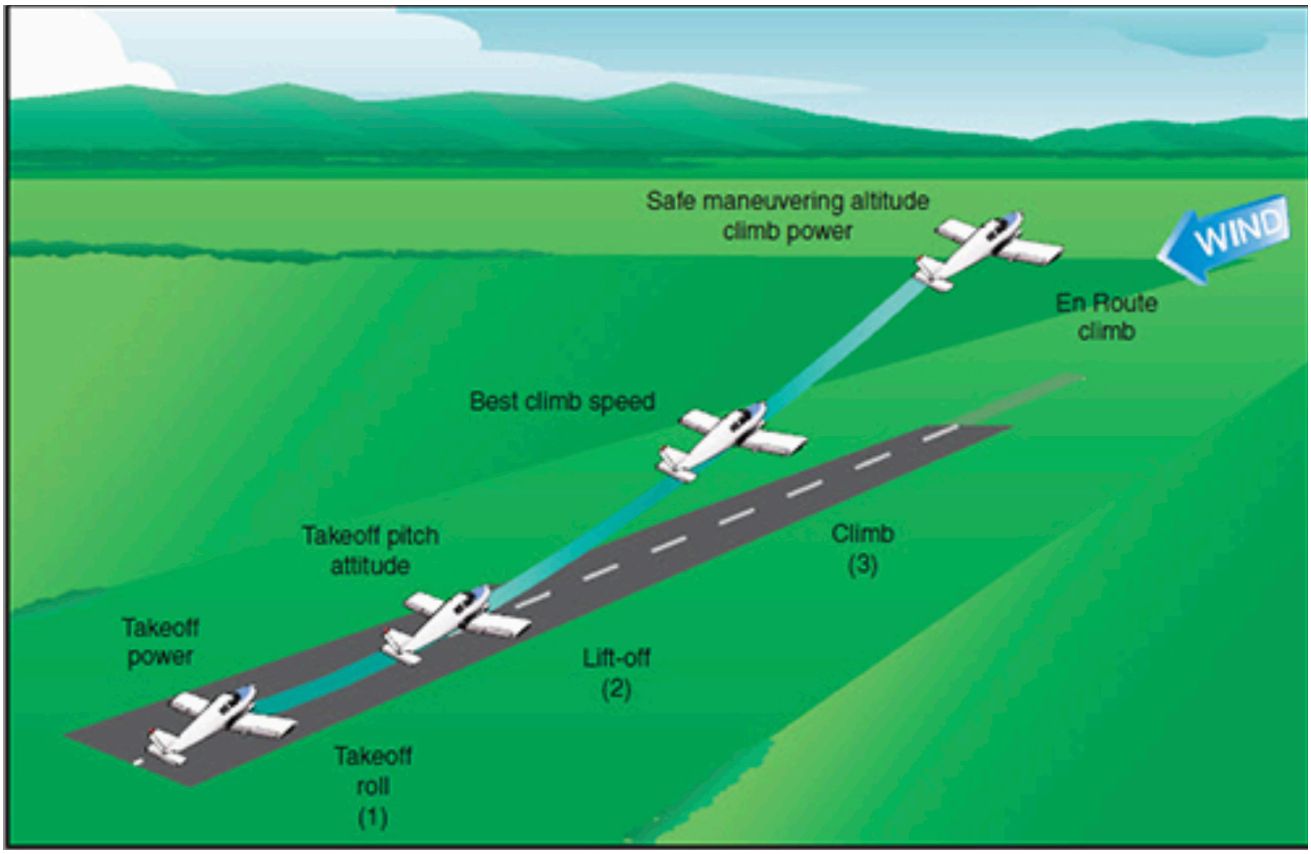
This is a quick flight, but it gives you the opportunity to learn about essential procedures and skills that you should apply whenever you fly. As you cruise toward your destination, you should frequently consider how you would deal with various situations, such as unexpected changes in the weather, problems with the airplane, or distractions caused by passengers.

Objectives

The primary goals of this flight are:

- Making a normal takeoff and climb to cruise altitude (see Figure 17-1)
- Completing a short cross-country flight to practice aircraft control and basic navigation (pilotage) skills.

Figure 17-1: A normal takeoff and climb as shown in Figure 5-1 of the Airplane Flying Handbook



Secondary goals include introducing:

- The basics of aircraft performance and weight and balance calculations
- The basics of obtaining a preflight briefing
- The information in the Airport/Facilities Directory (A/FD) and related resources

You should also use this short flight to practice the basics of risk assessment and aeronautical decision making (ADM).

Completion Standards

The detailed goals for this lesson are outlined in the table at the end of this chapter. In general, before moving on to the next lesson, you should understand:

- The procedures for a normal takeoff and climb
- The fundamental concepts of aircraft performance and weight-and-balance
- The basic procedure for obtaining a preflight weather briefing
- How to find information about airports in the A/FD

You can also evaluate your performance by reviewing the Airplane Flying Handbook for information about common errors (in the sections about normal takeoffs).

References and Resources

To prepare for this lesson, review the following references and resources. The AOPA Air Safety Institute publications are valuable supplements to the official information in the FAA references.

Title	Chapter/Section	Topic/Notes
Pilot's Handbook of Aeronautical Knowledge	Chapter 4, "Aerodynamics of Flight"	Weight and Balance (p. 4-35)
	Chapter 9, "Weight and Balance"	Review all sections
	Chapter 10, "Aircraft Performance"	Review all sections in pages 10-1–10-13
	Chapter 12, "Aviation Weather Services"	Aviation Weather Reports (p. 12-6) and Aviation Forecasts (p. 12-10)
	Chapter 15, "Navigation"	Measurement of Direction (p. 15-5) and Effect of Wind (p. 15-9)
Airplane Flying Handbook	Chapter 5, "Takeoff and Departure Climbs"	Review pages 5-1–5-4
Private Pilot Practical Test Standards	Task IV A: Normal and Crosswind Takeoff and Climb	Page 1-10
	Task VII: Navigation	Page 1-24
AOPA ASI Safety Advisor *Mastering Takeoffs and Landings*	–	–
AOPA ASI Safety Advisor *Operations at Nontowered Airports*	–	–

Preflight Briefing

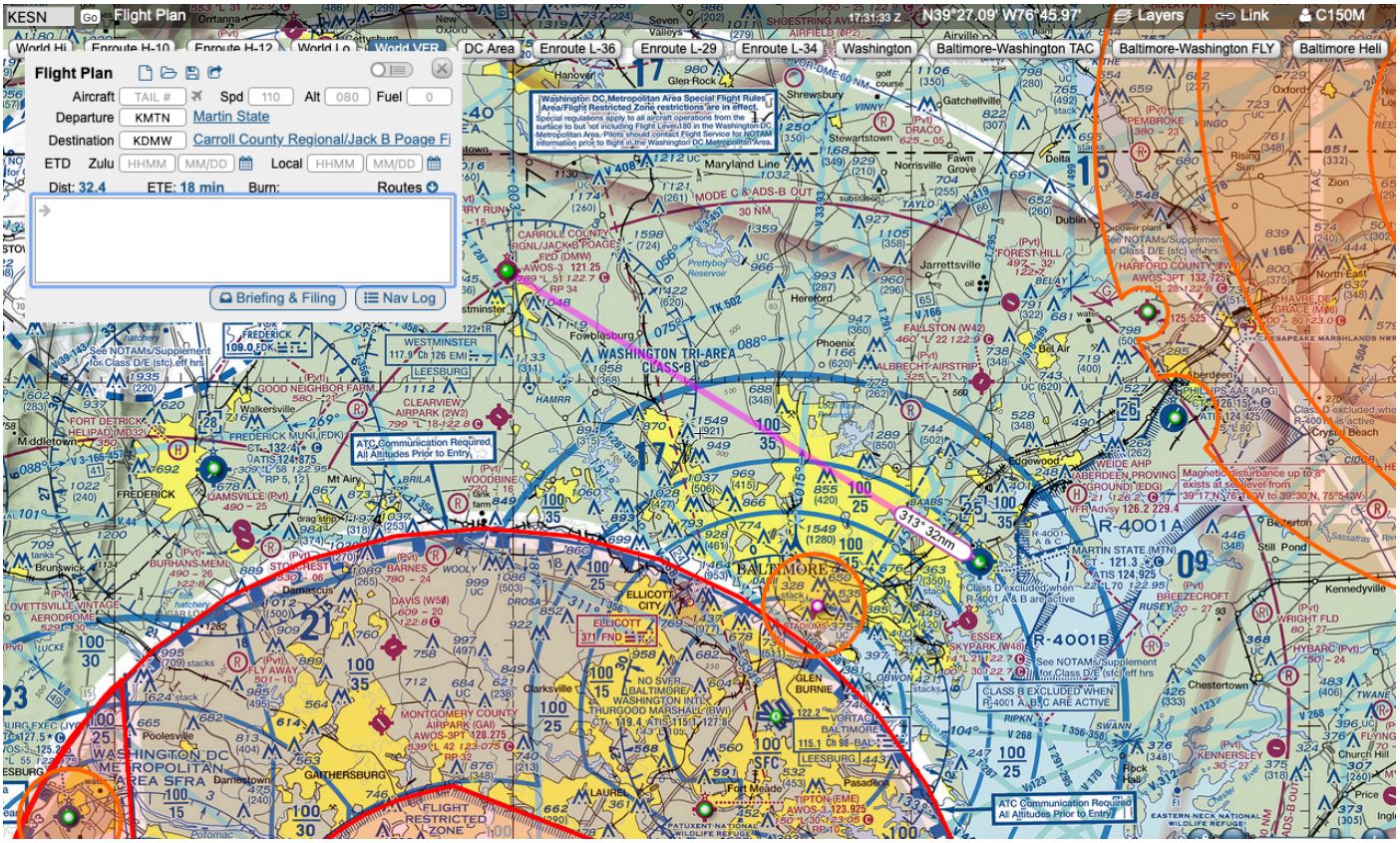
This lesson begins with your Cessna 172 at Martin State (KMTN) at Essex, MD. Perform a normal takeoff and climb to a cruising altitude of 2,500 ft. You should climb straight ahead and fly a heading of 313° to Westminster, MD (KDMW), a distance of about 32 nm, as shown in Figure 17-2. The flight will last about 18 minutes, including the time to climb to your cruising altitude, descend, and enter the traffic pattern at KDMW.

It's not necessary to fly the complete traffic pattern and land at KDMW, but you're welcome to try if you like.

Location and Weather

The lesson begins with your Skyhawk ready for takeoff from runway 15 at Martin State (KMTN). The skies are mostly clear with light winds from the southwest all along your route.

Figure 17-2: The course from Martin State to Westminster as shown on the Washington sectional chart on SkyVector



Tips for This Lesson

Here are a few suggestions to help you get the most from this lesson:

- The simulated weather is set for this flight, but it's a useful exercise to obtain and review real-time weather information before each flight.
- Practice getting weather information using online sources such as the Aviation Digital Data Service (ADDS) and Aviation Weather Center (AWC), and at unofficial resources for pilots such as NavMonster. You can find links to these resources at this book's website.
- Information about airports in the A/FD is provided at this book's website or online at http://SkyVector.com, http://AirNav.com, and similar sites.
- Use the view features in X-Plane and FSX to shrink or hide the instrument panel as you fly so that you get a better view of the landscape.
- Review the guidance about flying techniques in Chapters 11 and 12 of this book. The configuration tables for the Cessna 172 can help you quickly establish and maintain stable climb, cruise, and descent conditions.
- Soon after you reach cruise altitude, you should see Lock Raven Reservoir ahead and to the left. Compare its appearance in X-Plane or FSX to its depiction on the sectional chart.
- Use the interactive map in X-Plane or FSX occasionally to help you track your position. The interactive map is especially helpful as you approach the Westminster airport.
- As you approach Westminster , begin a descent to 1,800 ft. (the traffic pattern altitude at KDMW). The city should be clearly visible in either X-Plane or FSX.
- Plan to fly about two miles east of the airport so that you can enter the left-hand traffic pattern for runway 16

- As you approach KDMW, in X-Plane you should see a pair of small white lights that can help you spot the runway at KDMW. In FSX, you should see a pair of red lights. These lights are a visual approach slope indicator (VASI), which is available at many airports.

What-Ifs

This is a typical short flight, but you shouldn't become complacent about the weather, navigation, or your passengers. Keep the following considerations in mind as you fly toward KDMW:

- What available resources (including the autopilot) can you use to help you manage all of the tasks involved in flying the airplane?
- Frequently consider how you should respond to a passenger who needs assistance, a change in the weather, or other unexpected circumstances.
- For an additional challenge, assume that a passenger asks you to make a short detour for sightseeing around Lock Raven. Can you safely and confidently change course, enjoy the sights, and then resume the flight to KDMW? Or should you stick to the original plan?

Objectives and Desired Outcome Grading Sheet"

Scenario Activities	**Scenario Sub-Activities**	**Desired Outcome**
Practice performing a normal takeoff and climb.	–	Practice
Understand the basic process for obtaining information about the weather.	Use official and supplementary web resources to get weather reports and forecasts.	Describe/Practice
Understand how to obtain information about the airports you intend to use.	Use the A/FD and unofficial resources to learn airports along your route.	Describe/Practice
Understand the fundamentals of aircraft performance and weight-and-balance calculations.	Review the information and procedures described in the *Pilot's Handbook of Aeronautical Knowledge.*	Describe/Practice